

Specifications for PXIE MEBT BPMs

MEBT BPMs in operation - 9 (one BPM inside each quadrupole block)
Each BPM station measures position in 3 dimensions

Internal diameter - 30 mm
Available length* - 50 mm

Transverse resolution - 0.1 mm (for a single 1 μ s macro-pulse)
0.01 mm (CW, 0.1 sec update)

Accuracy of absolute
positioning- 1 mm
Phase resolution - 0.1 deg (162.5 MHz)

Nominal intensity- 2E08 H- per 162.5 MHz bunch (range 0.2 - 4 \cdot E08 ppb)
Typical rms beam half-size - 3mm
Typical rms longitudinal half-size - 10 degree (162.5 MHz)

Bakeable to 150C

The BPMs have to have single-bunch the gating capability.

The BPMs are welded in and cables are connected before the quads are mounted.

*Details of the available space between quads are in the following figure.

